

said optical fiber therein forming a space therebetween into which said first coating resin is injected; and

a second coating die having a second die hole which is concentric with said first die hole and through which said optical fiber passed through said first die hole is inserted and an upper end face comprising a circular plate opposing the lower end face of said first coating die so as to form a gap through which said second coating resin is injected into a space formed between said second die hole and the outer periphery of said optical fiber therein;

said protrusion being formed so as to reduce an annular lower-pressure region formed around said optical fiber in a flow of said second coating resin within said gap; and said protrusion is shaped like a circular truncated cone, wherein said apparatus satisfies:

$$0.05G < H < 0.5G$$

$$(D_2 - D_1)/2 < W < G$$

$$0.01 \text{ mm} \leq L < W$$

where H is the height of the circular truncated cone of said protrusion, W is the distance between the outer periphery of the bottom portion of said circular truncated cone and the inner peripheral face of said first die hole, L is the distance between the outer periphery of [the] a head portion of said circular truncated cone and the inner peripheral face of said first die hole,  $D_1$  is the inner peripheral face diameter of said first die hole on the outlet side of said optical fiber,  $D_2$  is the inner peripheral face diameter of said second die hole on the inlet side of said optical fiber, and G is the distance of the gap between said first and second coating dies.

3. An optical fiber coating apparatus according to claim 2, further comprising:

a positioning member having a cylindrical inner peripheral face adapted to fit the respective outer peripheral faces of said first and second coating dies,

D each of said first and second coating dies and the inner peripheral face of said positioning member being ~~constituted by~~ comprised of a material having a Young's modulus of  $5 \times 10^4$  kg/mm<sup>2</sup> or greater and a coefficient of thermal expansion of  $6 \times 10^{-6}/^\circ\text{C}$  or lower.

D D An optical fiber coating apparatus according to claim 5, further wherein said positioning member is ~~constituted by~~ comprised of an inner periphery member made of cemented carbide forming said inner peripheral face and an outer periphery member made of alloy tool steel having a lower Young's modulus and a higher coefficient of thermal expansion than said inner periphery member which are fastened and secured together by interference fitting.

C D C 5 An optical fiber coating apparatus according to claim 5, further wherein a bottom face of said first or second die has a tap used for attachment/detachment with respect to said positioning member.

cont'd D 5 An optical fiber coating apparatus according to claim 5, further comprising a nipple made of a material having a Young's modulus, a coefficient of thermal expansion, and a hardness which are substantially identical to those of the inner peripheral face of said positioning member, said nipple being adapted to fit the inner peripheral face of said positioning member such that a nipple hole for guiding the inserted optical fiber to said first die hole is arranged concentric with said first die hole.